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10/527,187

03/10/2005

Hui Li

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EXAMINER

PHUONG, DAI

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,187	Applicant(s) LI ET AL.	
	Examiner DAI A. PHUONG	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/15/2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14, 16 and 21-33 is/are rejected.
- 7) ☐ Claim(s) 15, 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Argument

1. Applicant's arguments, filed 11/15/2010, with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 16 and 24-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

NOTE: claim 16 is dependent on claim 15.

Regarding claim 16, the claim recites "the mobile stations transmit the routing information to the at least one base station". In contrast, claim 15 recites "the at least one base station transmit the routing information to the first, second and third mobile stations." Therefore, it is not clear whether the mobile stations or the at least one base station transmit the routing information.

Claims 24-30 are dependent on claim 16. Therefore, the claims also rejected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14, 21-23 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sibecas et al. (Pub. No: 20040203342) in view of Belcea (U.S. 7106703).

NOTE: claim 21 recites “the routing information describes a transmit power level”.

Regarding claim 14, Sibecas et al. disclose a method for routing a connection from a first mobile station to a second mobile station by way of at least one further mobile station in a wireless communication system (See Fig.1 to Fig.7), comprising:

acquiring positional information on the first mobile station, the second mobile station and the further mobile station ([0037] to [0044]).

However, Sibecas et al. do not disclose determining a route for the connection at a central routing device based on the positional information; generating routing information (transmit power level) at the central routing device corresponding to the determined route; and transmitting the routing information (transmit power level) from the central routing device to the first mobile station, the second mobile station and the further mobile station.

In the same field of endeavor, Belcea discloses determining a route for the connection at a central routing device based on the positional information (col. 3, line 19 to col. 11, line 44. Belcea discloses the mobile node 102 is required to provide a service, it searches for the

neighbor node (hopes) that provides the best connection to an IAP, or to a targeted correspondent. In general, there is more than one neighbor node able to support the connection, but only one is selected. If the selected neighbor node is not the destination of the connection, the neighbor node will repeat the process, selecting another neighbor node. This "hopping" creates a transmission route from the source of the connection to the destination, or to the IAP. Furthermore, the method for adjusting the number of hops depends on the policy applied for network neighborhood connectivity. In addition, a transmission path power loss from source to destination may be computed with the following equation (2): $L=32.45+20 \cdot \lambda \cdot \log_{10}(d \cdot f)$ dBm (2). As can be appreciated by one skilled in the art, path power loss increases as the distance between receiver and transmitter increases, as well as transmission delays);

generating routing information (transmit power level) at the central routing device corresponding to the determined route (col. 3, line 19 to col. 11, line 44. Belcea discloses the mobile node 102 is required to provide a service, it searches for the neighbor node (hopes) that provides the best connection to an IAP, or to a targeted correspondent. In general, there is more than one neighbor node able to support the connection, but only one is selected. If the selected neighbor node is not the destination of the connection, the neighbor node will repeat the process, selecting another neighbor node. This "hopping" creates a transmission route from the source of the connection to the destination, or to the IAP. Furthermore, the method for adjusting the number of hops depends on the policy applied for network neighborhood connectivity. In addition, a transmission path power loss from source to destination may be computed with the following equation (2): $L=32.45+20 \cdot \lambda \cdot \log_{10}(d \cdot f)$ dBm (2). As can be appreciated by

one skilled in the art, path power loss increases as the distance between receiver and transmitter increases, as well as transmission delays); and

transmitting the routing information (transmit power level) from the central routing device to the first mobile station, the second mobile station and the further mobile station (col. 3, line 19 to col. 11, line 44. Belcea discloses the mobile node 102 is required to provide a service, it searches for the neighbor node (hops) that provides the best connection to an IAP, or to a targeted correspondent. In general, there is more than one neighbor node able to support the connection, but only one is selected. If the selected neighbor node is not the destination of the connection, the neighbor node will repeat the process, selecting another neighbor node. This "hopping" creates a transmission route from the source of the connection to the destination, or to the IAP. Furthermore, the method for adjusting the number of hops depends on the policy applied for network neighborhood connectivity. In addition, a transmission path power loss from source to destination may be computed with the following equation (2): $L = 32.45 + 20 \cdot \log_{10}(d \cdot f)$ dBm (2). As can be appreciated by one skilled in the art, path power loss increases as the distance between receiver and transmitter increases, as well as transmission delays).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sibecas et al. by specifically including determining a route for the connection at a central routing device based on the positional information; generating routing information (transmit power level) at the central routing device corresponding to the determined route; and transmitting the routing information (transmit power level) from the central routing device to the first mobile station, the second mobile station and

the further mobile station, as taught by Belcea (U.S. 7106703), the motivation being in order to calculate an optimum transmission power level for transmission routes having a maximum number of hops between nodes and transmits the communication using the calculated power level such that a transmission path is achieved that results in a maximum pipeline delay during transmission that does not exceed allowable levels for the service class provided.

For claim 21, Belcea discloses wherein the routing information describes a transmit power level with which the first, second and further mobile stations are to operate for the connection (col. 3, line 19 to col. 11, line 44. Belcea discloses the mobile node 102 is required to provide a service, it searches for the neighbor node (hops) that provides the best connection to an IAP, or to a targeted correspondent. In general, there is more than one neighbor node able to support the connection, but only one is selected. If the selected neighbor node is not the destination of the connection, the neighbor node will repeat the process, selecting another neighbor node. This "hopping" creates a transmission route from the source of the connection to the destination, or to the IAP).

For claim 22, Belcea discloses wherein the routing information describes transmission resources which the first, second and further mobile stations are to reserve for the connection (col. 3, line 19 to col. 11, line 44).

For claim 23, Belcea discloses wherein when the connection is to be terminated, the central routing device instructs the first, second and further mobile stations to free the transmission resources used for the connection (col. 3, line 19 to col. 11, line 44).

Regarding claim 31, this claim is rejected for the same reasons as set forth in claim 14.

Regarding claim 32, this claim is rejected for the same reasons as set forth in claim 14.

Regarding claim 33, this claim is rejected for the same reasons as set forth in claim 14.

Allowable Subject Matter

6. Claims 15 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 17-18 and 20 are also objected because the claims are dependent on claims 15 and 19 respectively.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAI A. PHUONG whose telephone number is 571-272-7896. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dai A Phuong/
Primary Examiner, Art Unit 2617
Date: 03/10/2010

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